

Risograph Gas Evolution Plot @ 23.8°C for 50 gm Biscuit Dough  
Samples made with sodium bicarbonate (soda), E-soda #2  
and BalChem e-soda #1

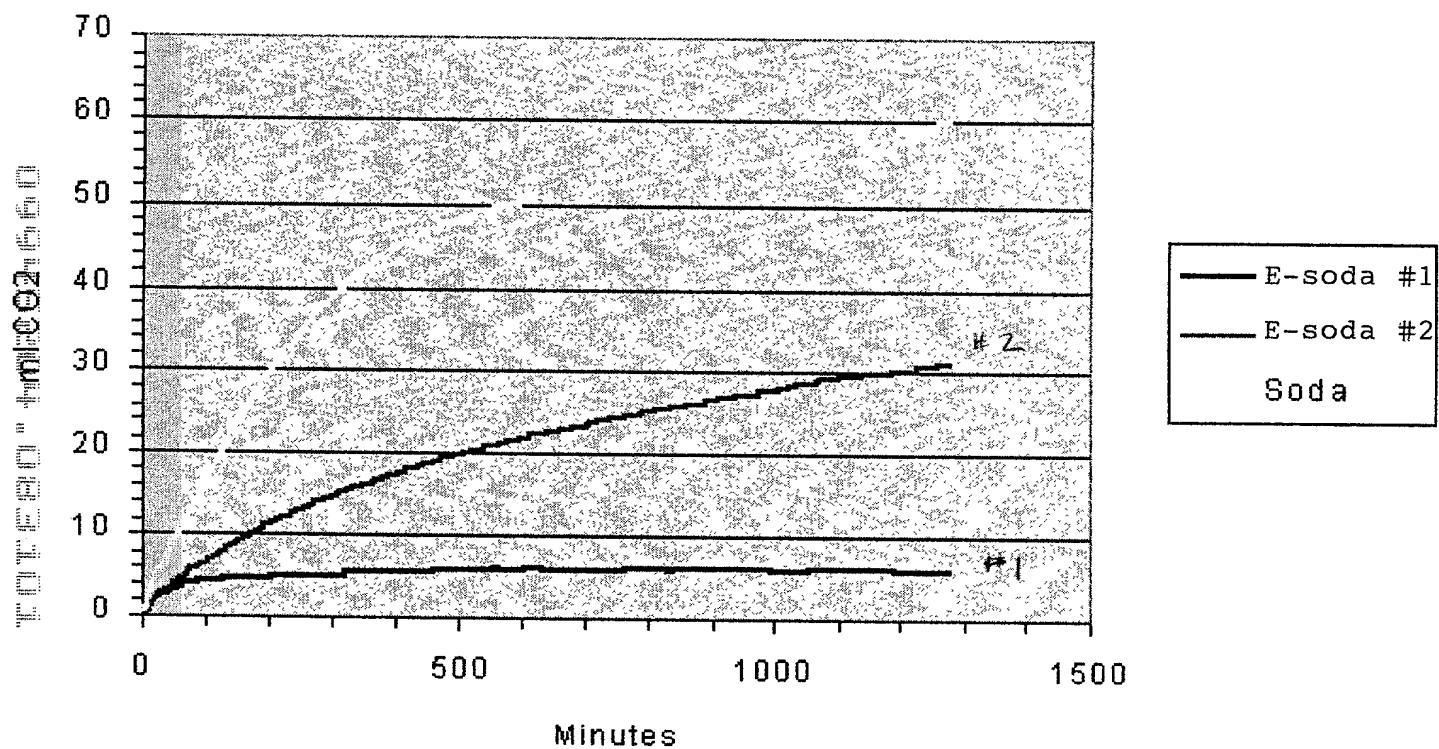


FIG. 1

**MINUTES TO 60% REACTION**

**BATTER TEMPERATURE, °C**

**SAPP-28** 37.7 Kcal/mole

**SAPP-40** 33.7 Kcal/mole

**SAPP, RD-1** 27.5 Kcal/mole

**AMCP** 16.7 Kcal/mole

**Monocalcium Phosphate Monohydrate** 16.8 Kcal/mole

**Dicalcium Phosphate Dihydrate** 37.8 Kcal/mole

Fig. 2. Reaction rate vs batter temperature for various leavening acids. SAPP, sodium acid pyrophosphate; SALP, sodium aluminum sulfate; AMCP, anhydrous monocalcium phosphate; RD-1 is a grade of SAPP.

60°F      83°F

Biscuit Dough Volume Expansion - Dough made with free sodium bicarbonate and e-soda samples #1 and #2 from BalChem

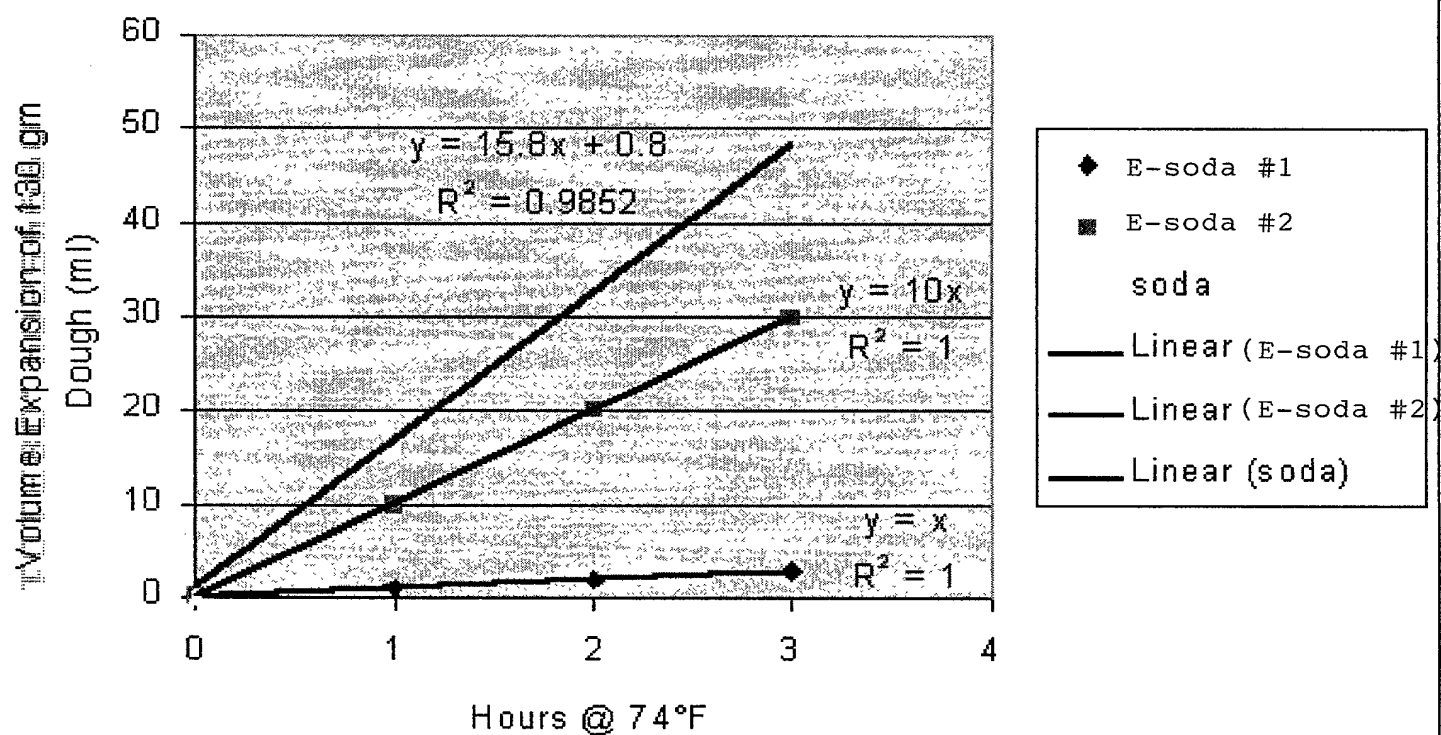


FIG. 3

Low Pressure Refrigerated Dough Package Volume (average) vs  
Time @ 45°F - Dough Made with LauriCal e-soda #1, 60%,  
E-soda #2, and Free Sodium Bicarbonate

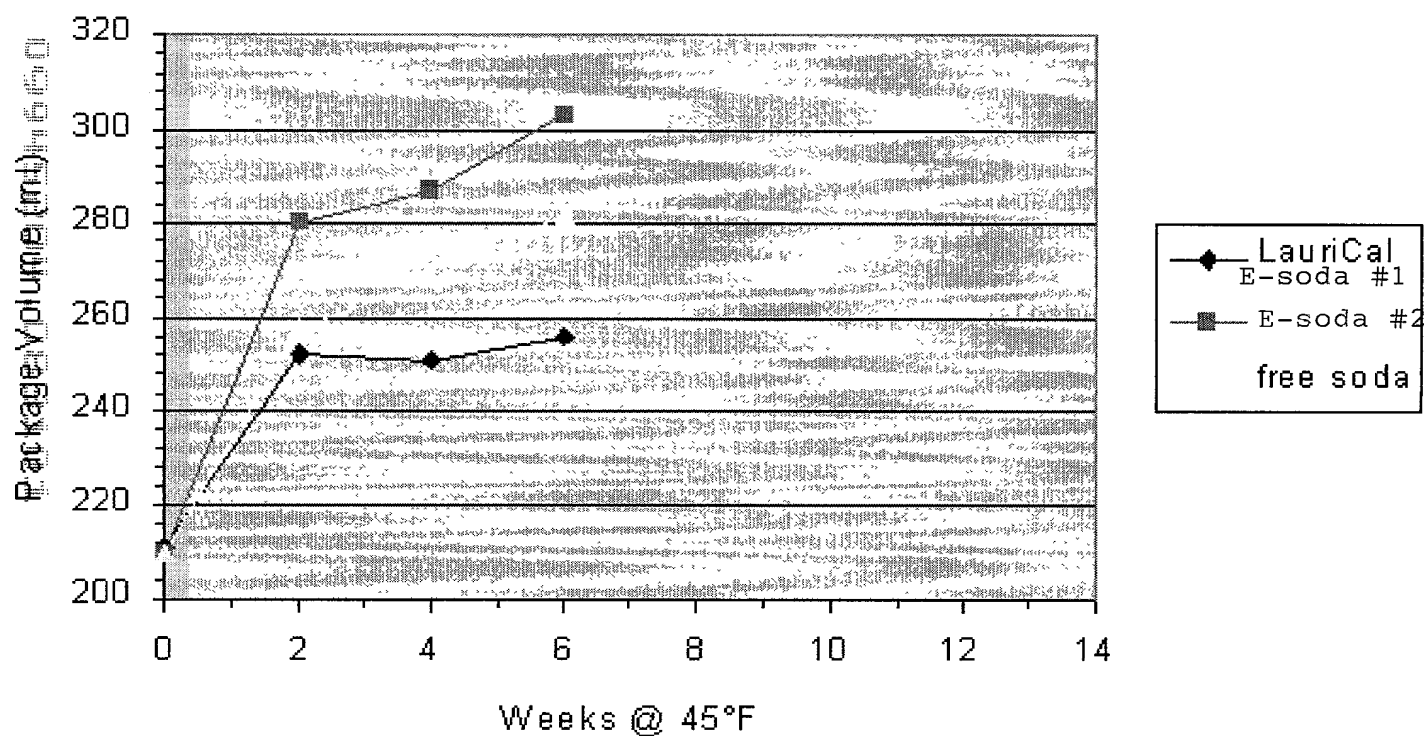


FIG. 4